Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (*Currently Amended*) A method, comprising:

adjusting a DC offset in a digital quadrature signal;

performing delta sigma modulation on the adjusted [[a]] digital quadrature signal;

converting the modulated signal to an analog signal;

converting the analog signal to an RF signal; and

transmitting the RF signal~~, wherein the performing of the delta sigma modulation comprises performing 2nd order delta sigma modulation to output 4 bits from a 10 bit output~~.

2-3. (*Canceled*)

4. *(Original)* The method of claim 1, further comprising amplifying the RF signal before the transmitting.

5. (*Canceled*)

6. *(Original)* The method of claim 1, further comprising coding the modulated signal with a thermometer code.

7. *(Currently Amended)* The method of claim 1, wherein the digital quadrature signal is formed using at least one of a GFSK modulation, a 4-PSK modulation, and a 8-PSK modulation ~~modulations~~.

8. *(Currently Amended)* The method of claim 1, further comprising performing interpolation filtering on the adjusted digital quadrature signal before the delta sigma modulation.

9. *(Currently Amended)* The method of claim 8, wherein performing the interpolation filtering comprises reducing ~~reduces~~ the adjusted digital quadrature signal from 12 bits to 10 bits.

10. (*Currently Amended)* A system, comprising:

means for adjusting a DC offset in a digital quadrature signal;

means for performing delta sigma modulation on the adjusted [[a]] digital quadrature signal;

means for converting the modulated signal to an analog signal;

means for converting the analog signal to an RF signal; and

means for transmitting the RF signal~~, wherein the means for performing delta sigma modulation comprises means for performing 2nd order delta sigma modulation to output 4 bits from a 10 bit input~~.

11. *(Currently Amended)* An RF transmitter, comprising:

a DC offset device configured to adjust a DC offset in a digital quadrature signal;

a delta sigma modulator configured to perform a ~~capable of performing~~ delta sigma modulation on the adjusted [[a]] digital quadrature signal;

a digital-to-analog converter (DAC) configured to convert ~~DAC, communicatively coupled to the delta sigma modulator, capable of converting~~ the modulated signal to an analog signal;

a mixer configured to convert ~~, communicatively coupled to the DAC, capable of converting~~ the analog signal to an RF signal; and

an antenna configured to transmit the RF signal ~~, communicatively coupled to the mixer, capable of transmitting the RF signal, wherein the delta sigma modulator comprises a 2nd order delta sigma modulator configured to output 4 bits from a 10 bit input~~.

12-13. (*Canceled)*

14. *(Currently Amended)* The transmitter of claim 11, further comprising a power amplifier configured to amplify ~~, communicatively coupled to the antenna and the mixer, capable of amplifying~~ the RF signal before the antenna transmits the RF signal.

15. (*Canceled)*

16. *(Currently Amended)* The transmitter of claim 11, wherein the ~~further comprising~~ delta sigma modulator is configured to code ~~further capable of coding~~ the modulated signal with a thermometer code.

17. *(Currently Amended)* The transmitter of claim 11, wherein the digital quadrature signal is formed using at least one of a GFSK modulation, a 4-PSK modulation, and a 8-PSK modulation ~~modulations~~.

18. *(Currently Amended)* The transmitter of claim 11, further comprising an interpolation filter configured to perform ~~, communicatively coupled to the delta sigma modulator, capable of performing~~ interpolation filtering on the adjusted digital quadrature signal before the delta sigma modulation.

19. *(Currently Amended)* The transmitter of claim 18, wherein the interpolation filter is configured to reduce ~~filtering reduces~~ the adjusted digital quadrature signal from 12 bits to 10 bits.

20. (*New*) The method of claim 1, further comprising:

generating the digital quadrature signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

21. (*New*) The method of claim 20, wherein converting the modulated signal comprises receiving a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

22. (*New*) The system of claim 10, further comprising:

means for generating the digital signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

23. (*New*) The system of claim 22, wherein means for converting the modulated signal comprises means for receiving a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

24. (*New*) The RF transmitter of claim 11, further comprising:

a digital quadrature signal modulator configured to generate the digital quadrature signal, wherein the digital quadrature signal comprises a first carrier wave (I) and a second carrier wave (Q), I and Q having a phase difference between the two carrier waves.

25. (*New*) The RF transmitter of claim 24, wherein the DAC is configured to receive a modulated signal corresponding to I and a modulated signal corresponding to Q, wherein I and Q maintain substantially the same phase difference between the two carrier waves.

26. (*New*) The RF transmitter of claim 11, further comprising:

a binary to thermometer decoder configured to convert the modulated signal to a thermometer code.